(19) World Intellectual Property Organization International Bureau



544145

(43) International Publication Date 2 September 2004 (02.09.2004)

PCT

(10) International Publication Number WO 2004/074314 A2

(51) International Patent Classification7:

C07K

(21) International Application Number:

PCT/US2004/004262

(22) International Filing Date: 13 February 2004 (13.02.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/319,946 60/319,956 14 February 2003 (14.02.2003) US 19 February 2003 (19.02.2003)

(71) Applicant (for all designated States except US): UNIVER-SITY OF SOUTH FLORIDA [US/US]; 4202 East Fowler Avenue, FAO 126, Tampa, FL 33620-7900 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): MOHAPATRA, Shyam, S. [US/US]; 18510 Country Crest Place, Tampa, FL 33647 (US).

(74) Agents: LADWIG, Glenn, P. et al.; Saliwanchik, Lloyd & Saliwanchik, 2421 N.W. 41st Street, Suite A-1, Gainesville, FL 32606 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CHISTOSAN-DERIVATIVES FOR GENE DELIVERY AND EXPRESSION

(57) Abstract: The present invention provides particles comprising chitosan, or a derivative thereof, useful as delivery vehicles for polynucleotides encoding polypeptides, compositions comprising such particles and a pharmaceutically acceptable carrier, and methods for delivering polynucleotides using such particles. Optionally, the particles of the invention further comprise a lipid component. The present further provides a method for enhancing interferon-gamma expression to regulate the production of cytokines secreted by T-helper type 2 (Th2) cells within a subject by administering an effective amount of a particle of the subject invention to the subject, wherein the particle comprises a polynucleotide encoding interferon-gamma.